

REMARKS/ARGUMENTS

The Applicants request that the Examiner consider the following remarks in addition to the above claim amendment.

Claim Rejections – 35 USC § 102(e)

Claims 1-4, 8-16, 18/1, and 18/11 stand rejected under 35 USC § 102(e) as being anticipated by Schaer et al. (U.S. Patent no. 6,522,930). In particular, the Examiner asserts, among other things, that “Schaer et al. disclose an ablation catheter comprising a porous conductor (col. 18 line 15+), a catheter shaft that includes a proximal portion, a distal portion, at least one lumen adapted to carry wires (figure 3), an active region (58) including a plurality of portholes (62).” 7 June 2004 Office action at p. 2. The Applicants respectfully traverse this rejection for at least the following reasons.

Schaer et al. is directed to an irrigated ablation device assembly, and discloses a number of embodiments. The irrigated ablation member 12 (e.g., Figs. 1 and 2) comprises at least one electrode (e.g., 52 in Fig. 3). The electrode or electrodes are typically covered by a tubular porous member 58. “The porous member is adapted to allow a volume of fluid within the inner space to be pressurized to a predetermined pressure and to pass from within the inner space, through the porous wall and to an exterior of the sheath member.” Schaer et al., col. 10, ll. 17-21. The porous membrane comprises “a porous, biocompatible, generally noncompressable material.” Id. at col. 15, ll. 17-19. As shown to good advantage in Figs. 2, 2A, and 3 of Schaer et al., the tubular porous member 58 may be connected to the outer tubular member 28 comprising part of the elongated body 16 (Fig. 1) by a sealing means 60. In particular, openings 62 (Fig. 2) may be formed radially through the proximal end of the tubular porous member 58. The tubular porous member 58 is then slid onto the necked-down portion of the outer tubular member 28 (Figs. 2A and 3). Finally, as shown to best advantage in Fig. 2A, the sealing member 60 is fused through the holes 62 through the porous member 58 and onto the outer tubular member 28. The sealing member 60 thus connects through the openings 62 in the tubular porous member 58 to the outer tubular member 28. The sealing member 60 “melts through” the openings 62 and bonds with the outer tubular member 28 to secure the outer tubular member 28 to the porous member 58 while sealing the joint (see, Schaer et al., col. 16, ll. 12-25).

Schaer et al. further discloses that the electrodes, rather than being the discrete wire coils 52 shown in, for example, Fig. 3, may comprise braided wire 48 and 49 (Figs. 4A and 4B, respectively), a “fish bone” pattern 51 (Fig. 4C), or an “arches” pattern 72 (Fig. 4D). Further, an insulated, braided wire structure 76 (Fig. 5) may support the inner surface of an electrode 52a as shown in Fig. 5. As shown in Figs. 7-10 of Schaer et al., the electrode 52d may be mounted on the outer surface of the porous membrane 58c or 58d rather than against its interior surface.

The Applicants respectfully submit that claims 1-4, 8-16, 18/1, and 18/11 cannot be anticipated by Schaer et al. Claim 1 is an independent claim, and claims 2-4, 8-10, and 18/1 depend either directly or indirectly from independent claim 1. Independent claim 1 requires, for example, an active region that includes a plurality of portholes adapted to introduce therapeutic energy from the porous conductor to the tissue. Schaer et al. fails to disclose or suggest the claimed plurality of portholes that are adapted to introduce therapeutic energy to the tissue. The Examiner has referred to the openings 62 (see Fig. 2 of Schaer et al.) as anticipating the Applicants’ claimed plurality of portholes 44, 46, 48 (see, e.g., Applicants’ Figs. 1-5). As discussed in the last paragraph, however, the openings 62 of Schaer et al. are blocked with material as shown to best advantage in the cross-sectional view of Fig. 2A of Schaer et al. The “openings” 62 do not and cannot permit the introduction of therapeutic energy from the porous conductor to the tissue as the Applicants’ claimed plurality of portholes does. Rather, the openings 62 are used to secure the outer tubular member 28 to the porous member 58 (see Schaer et al., Figs. 2 and 2A). Thus, the openings 62 cannot anticipate the Applicants’ portholes 44, 46, 48. The Applicants also respectfully submit that the porous membrane 58 of Schaer et al., which permits “fluid weeping” through the membrane (see, e.g., Schaer et al., col. 15, ll. 34-39; col. 17, ll. 41-44; and col. 21, ll. 41-43), does not anticipate or suggest the Applicants’ claimed plurality of portholes since it does not permit the introduction of therapeutic energy from the porous conductor to the tissue as does the Applicants’ claimed plurality of portholes. The Applicants thus respectfully request that the Examiner reconsider and withdraw the rejection of claim 1 under § 102(e) based upon Schaer et al.

The Applicants respectfully request that the Examiner also reconsider and withdraw the rejection of claims 2-4, 8-10, and 18/1 under § 102(e) based upon Schaer et al. for at least the reasons mentions in the last paragraph since each of these claims depends directly or indirectly from independent claim 1.

Regarding dependent claim 3, the Applicants also respectfully submit that Schaer et al. does not anticipate this claim under § 102(e) for these additional reasons. Since Schaer et al. fails to disclose the claimed plurality of portholes as explained in the last paragraph, logically Schaer et al. cannot disclose the Applicants' claimed first lumen that is adapted to carry a conductive fluid medium to the plurality of portholes, or the Applicants' claimed porous conductor attached within the first lumen over the plurality of portholes. For at least these additional reasons, in addition to the reasons previously mentioned with regard to the § 102(e) rejection of independent claim 1, the Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 3 under § 102(e) based upon Schaer et al.

Regarding dependent claim 4, the Applicants also respectfully submit that Schaer et al. does not anticipate this claim under § 102(e) for this additional reason. Since Schaer et al. fails to disclose the claimed plurality of portholes as explained above, logically Schaer et al. cannot disclose the Applicants' claimed plurality of portholes arranged in the configuration required by claim 4. For at least this additional reason, in addition to the reasons previously mentioned in connection with the § 102(e) rejection of independent claim 1 and dependent claim 3, the Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 4 under § 102(e) based upon Schaer et al.

Regarding dependent claim 10, the Applicants also respectfully submit that Schaer et al. does not anticipate this claim under § 102(e) for this additional reason. Since Schaer et al. fails to disclose the claimed flattened outer peripheral wall, Schaer et al. cannot anticipate claim 10. For at least this additional reason, in addition to the reasons previously mentioned with regard to the § 102(e) rejection of independent claim 1, the Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 10 under § 102(e) based upon Schaer et al.

Regarding dependent claim 18/1, the Applicants also respectfully submit that Schaer et al. does not anticipate this claim under § 102(e) for this additional reason. Since Schaer et al.

fails to disclose the claimed cross-sectional configuration along the active region that is adapted to bias the active region against the tissue, Schaer et al. cannot anticipate claim 18/1. For at least this additional reason, in addition to the reasons previously mentioned with regard to the § 102(e) rejection of independent claim 1, the Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 18/1 under § 102(e) based upon Schaer et al.

Claim 11 is an independent claim, and claims 12-16 and 18/11 depend either directly or indirectly from independent claim 11. Independent claim 11 requires, for example, an active region that includes at least one porthole adapted to deliver a conductive fluid medium to the tissue being treated, wherein ablation energy from the mesh electrode is supply to the tissue through the conductive fluid medium. Schaer et al. fails to disclose or suggest the claimed at least one porthole that is adapted to deliver ablation energy to the tissue. For the reasons previously mentioned, the plugged openings 62 (see Fig. 2 of Schaer et al.) cannot anticipate the Applicants' claimed at least one porthole. The Applicants thus respectfully request that the Examiner reconsider and withdraw the rejection of claim 11 under § 102(e) based upon Schaer et al.

The Applicants respectfully request that the Examiner also reconsider and withdraw the rejection of claims 12-16 and 18/11 under § 102(e) based upon Schaer et al. for at least the reasons mentions in the last paragraph since each of these claims depends directly or indirectly from independent claim 11.

Regarding dependent claim 15, the Applicants also respectfully submit that Schaer et al. does not anticipate this claim under § 102(e) for these additional reasons. Since Schaer et al. fails to disclose the Applicants' portholes as explained above, Schaer et al. cannot disclose the plurality of portholes required by claim 15, or the claimed arrangement of the plurality of portholes. For at least these additional reasons, in addition to the reasons previously mentioned in connection with the § 102(e) rejection of independent claim 11, the Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 15 under § 102(e) based upon Schaer et al.

Regarding dependent claim 18/11, the Applicants also respectfully submit that Schaer et al. does not anticipate this claim under § 102(e) for this additional reason. Since Schaer et al. fails to disclose the claimed cross-sectional configuration along the active region that is adapted

to bias the active region against the tissue, Schaer et al. cannot anticipate claim 18/11. For at least this additional reason, in addition to the reasons previously mentioned with regard to the § 102(e) rejection of independent claim 11, the Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 18/11 under § 102(e) based upon Schaer et al.

Claim Rejections – 35 USC § 103

Claims 19/1, 19/11, 20/1, and 20/11 stand rejected under 35 USC § 103(a) as being unpatentable over Schaer et al. standing alone. In particular, the Examiner asserts that Schaer et al. teaches all of the limitations of the claims except for the cross-sectional configuration having a “polygonal configuration.” According to the Examiner, “[t]o have provided a polygonal cross sectional configuration would have been obvious to one having ordinary skill in the art at the time the invention was made since it has been held to be within the general skill of a worker in the art to select a known shape on the basis of its suitability for the intended use as a matter of obvious design choice.” 7 June 2004 Office action, ¶ bridging pp. 2 & 3. The Applicants respectfully traverse this rejection for at least the following reasons. The claims 19 and 20 each require more than merely a “polygonal configuration.” Claim 19 requires that the “cross-sectional configuration along said active region is a polygonal configuration having a flattened outer peripheral wall.” Claim 20 required that the “polygonal configuration is selected from the group consisting of a D-shaped configuration, a triangular configuration, and a rectangular configuration.” Schaer et al. fails to disclose or suggest these claimed cross-sectional configurations that bias the active region toward the tissue to be treated (see, e.g., Figs. 13-19 of the Applicants’ application). The Applicants thus respectfully request that the Examiner reconsider and withdraw the rejection of claims 19/1, 19/11, 20/1, and 20/11 under § 103(a) or provide further support for the assertion that the claimed polygonal configurations would have been obvious to one of ordinary skill in the art at the time the invention was made.

Claims 5-7, 17, 18/17, 19, and 20 currently stand rejected under § 103(a) as being unpatentable over Schaer et al. in view of Stewart et al. (U.S. Application publication no. US 2003/0130713 A1). In particular, the Examiner asserts that Schaer et al. teaches all of the limitations of the claims “except a shape retention wire mounted in the second lumen. Stewart et

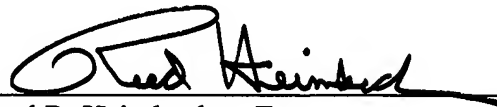
al. disclose a similar device and teach that it is well known in the art to provide a shape retention wire within a catheter as a retention mechanism to engage the heart and inhibit retraction of the device (paragraph 0014+). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a shape memory wire in the Schaer et al. catheter to provide a means of retaining the device in contact with the heart.” 7 June 2004 Office action, 1st full ¶ on p. 3. The Applicants respectfully traverse this rejection for at least the following reasons in addition to the reasons already provided above in connection with the discussion of the § 102(e) rejection of independent claim 1 and independent claim 11. The remarks provided above in connection with the § 102(e) rejection of independent claim 1 are relevant to claims 5-7, 19/1, and 20/1 since these claims depend indirectly from independent claim 1. The remarks provided above in connection with the § 102(e) rejection of independent claim 11 are relevant to claims 19/11 and 20/11 since these claims depend indirectly from independent claim 11.

In this § 103(a) rejection of claims 5-7, 17, 18/17, 19, and 20, the Examiner refers to paragraph 0014+ of the Stewart et al. application. Stewart et al., however, discloses a transseptal catheter with a retention mechanism. This catheter and retention mechanism facilitate placement of a guide catheter distal segment 62 within, for example, the left atrium so that it remains anchored while a distal tip electrode or electrodes are pushed through the guide catheter for placement adjacent to a wall of the left atrium during RF ablation and/or EP mapping. The Stewart et al. retention mechanism secures an outer, guiding catheter so that a second catheter, which does the actual tissue treatment or mapping, may be placed adjacent to tissue to be treated or mapped. The Applicants thus submit that Stewart et al. does not disclose or render obvious the Applicants’ claimed “shape retention wire” (claims 5, 6, and 17) or “super elastic wire” (claim 7). The Applicants’ claimed “shape retention wire” or “super elastic wire” help give the working portion of the catheter itself a desired configuration when it is extended from a guide catheter – they are not, however, anchors for the guide catheter. The Applicants, therefore, respectfully request that the Examiner reconsider and withdraw this rejection of claims 5-7, 17, 18/17, 19, and 20 under § 103(a).

Conclusion

The Applicants have amended claims 1, 3, 10, and 11. Following entry of this amendment, claims 1-20 are pending and not withdrawn in this application. The Applicants believe that they have now addressed each of the Examiner's concerns with claims 1-20, and they respectfully request a notice of allowance of these claims.

Respectfully submitted this 7th day of September 2004.



Reed R. Heimbecher, Esq.
Registration No. 36,353

Customer No. 33486
HEIMBECHER & ASSOC., LLC
390 Union Boulevard, Suite 650
Lakewood, Colorado 80228-6512
303-279-8888 (TEL)
303-985-0651 (FAX)
reed@heimbecher.com

cc: Client
Docketing